

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

|  |  |  |
|--|--|--|
| Applicant's or agent's file reference<br><b>IGT1P042C1X1</b> | <b>FOR FURTHER ACTION</b><br>see Form PCT/ISA/220<br>as well as, where applicable, item 5 below. |  |
| International application No.<br><b>PCT/US2008/071830</b>    | International filing date (day/month/year)<br><b>31/07/2008</b>                                  | (Earliest) Priority Date (day/month/year)<br><b>01/08/2007</b> |
| Applicant<br><b>IGT</b>                                      |  |  |

This International search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International search report consists of a total of 5 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

a. With regard to the **language**, the International search was carried out on the basis of:

- ☒ the international application in the language in which it was filed  
☐ a translation of the International application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐ This International search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6b(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box No. II)

3. ☒ **Unity of invention is lacking** (see Box No. III)

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant  
☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☒ the text is approved as submitted by the applicant  
☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 2  
☒ as suggested by the applicant  
☐ as selected by this Authority, because the applicant failed to suggest a figure  
☐ as selected by this Authority, because this figure better characterizes the invention  
b. ☐ none of the figures is to be published with the abstract

## INTERNATIONAL SEARCH REPORT

International application No

PCT/US2008/071830

A. CLASSIFICATION OF SUBJECT MATTER  
INV. G06F9/445

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
|-----------|--|-----------------------|
| X         | EP 0 491 585 A (IBM [US])<br>24 June 1992 (1992-06-24)<br>column 3, lines 9-21<br>column 3, line 35 - column 4, line 42<br>----- | 1-26                  |

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

## \* Special categories of cited documents:

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the International filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the International filing date but later than the priority date claimed

\*I\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*A\* document member of the same patent family

Date of the actual completion of the International search

29 October 2008

Date of mailing of the international search report

20/04/2009

Name and mailing address of the ISA/  
European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
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Authorized officer

Dieben, Marc

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2008/071830

## Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This international searching authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search reportcovers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-26

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

## 1. claims: 1-26

1-st: Method and apparatus for loading application programs into memory for execution comprising:  
receiving, identifying and/or determining an application program that includes one or more application program components required to be stored in said memory for execution of said application program;  
determining whether each one of said one or more application program components of said application program are stored in said memory so that said application program can be executed by said computing system after said receiving, identifying and/or determining of said application program; and  
causing at least one application program component of said one or more application program components of said application program not to be loaded into said memory when said determining determines that said at least one application program component is stored into said memory and consequently available for execution of said application program.

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## 2. claims: 27-50

2-nd invention: Method for generating differential application data comprising:  
receiving, identifying and/or determining first and second application programs, wherein said first and second application programs respectively include first and second individual application program components required for execution of said application programs in said computing environment;  
determining whether said first and second individual application program components have at least one common individual application program in common after said receiving, identifying and/or determining of said first and second application programs;  
generating application differential data for said first and/or second applications programs, wherein said application differential data effectively indicates that said first and second application programs have least one common individual application program components in common when said determining determines that said first and second individual application program components have at least one common individual application program in common; and  
store the application differential data for execution of said first and/or second applications programs.

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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No

PCT/US2008/071830

| Patent document<br>cited in search report | Publication<br>date | Patent family<br>member(s) | Publication<br>date |
|---|---------------------|----------------------------|---------------------|
| EP 0491585                                | A                   | 24-06-1992                 | JP                  |
|   |                     | US                         | 4268927 A           |
|   |                     |                            | 5247681 A           |
|   |                     |                            | 24-09-1992          |
|   |                     |                            | 21-09-1993          |

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

## PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY  
(PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/US2008/071830

International filing date (day/month/year)  
31.07.2008

Priority date (day/month/year)  
01.08.2007

International Patent Classification (IPC) or both national classification and IPC  
INV. G06F9/445

Applicant  
IGT

### 1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1 (a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

### 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

### 3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office  
P.B. 5818 Patentlaan 2  
NL-2280 HV Rijswijk - Pays Bas  
Tel. +31 70 340 - 2040  
Fax: +31 70 340 - 3016

Date of completion of  
this opinion

see form  
PCT/ISA/210

Authorized Officer

Dieben, Marc

Telephone No. +31 70 340-4440



**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US2008/071830

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| Box No. I | Basis of the opinion |
|-----------|----------------------|
|-----------|----------------------|

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1. With regard to the **language**, this opinion has been established on the basis of:

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

**a. type of material:**

- ☐ a sequence listing
- ☐ table(s) related to the sequence listing

**b. format of material:**

- ☐ on paper
- ☐ in electronic form

**c. time of filing/furnishing:**

- ☐ contained in the international application as filed.
- ☐ filed together with the international application in electronic form.
- ☐ furnished subsequently to this Authority for the purposes of search.

4. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.  
PCT/US2008/071830

**Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of

☐ the entire international application

☒ claims Nos. 19, 27-50

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international search (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 19 are so unclear that no meaningful opinion could be formed (*specify*):

see separate sheet

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed (*specify*):

☒ no international search report has been established for the whole application or for said claims Nos. 27-50

☐ a meaningful opinion could not be formed without the sequence listing; the applicant did not, within the prescribed time limit:

☐ furnish a sequence listing on paper complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Searching Authority in a form and manner acceptable to it.

☐ furnish a sequence listing in electronic form complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Searching Authority in a form and manner acceptable to it.

☐ pay the required late furnishing fee for the furnishing of a sequence listing in response to an invitation under Rules 13ter.1(a) or (b).

☐ a meaningful opinion could not be formed without the tables related to the sequence listings; the applicant did not, within the prescribed time limit, furnish such tables in electronic form complying with the technical requirements provided for in Annex C-bis of the Administrative Instructions, and such tables were not available to the International Searching Authority in a form and manner acceptable to it.

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in electronic form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.

☐ See Supplemental Box for further details



**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US2008/071830

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**Box No. IV Lack of unity of invention**

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1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees, the applicant has, within the applicable time limit:
- ☐ paid additional fees
  - ☐ paid additional fees under protest and, where applicable, the protest fee
  - ☐ paid additional fees under protest but the applicable protest fee was not paid
  - ☒ not paid additional fees
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees. ....
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
- ☐ complied with
  - ☒ not complied with for the following reasons:  
see separate sheet
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☐ all parts.
  - ☒ the parts relating to claims Nos. 1-26

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

|                               |             |                                |
|-------------------------------|-------------|--------------------------------|
| Novelty (N)                   | Yes: Claims | <u>5-15, 18, 22, 24-26</u>     |
|                               | No: Claims  | <u>1-4, 16, 17, 20, 21, 23</u> |
| Inventive step (IS)           | Yes: Claims |                                |
|                               | No: Claims  | <u>1-26</u>                    |
| Industrial applicability (IA) | Yes: Claims | <u>1-26</u>                    |
|                               | No: Claims  |                                |

2. Citations and explanations

see separate sheet

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US2008/071830

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**Box No. VIII    Certain observations on the international application**

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The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**

**Re Item IV.**

The separate inventions of inventions are:

1-26

1-st: Method and apparatus for loading application programs into memory for execution comprising:

receiving, identifying and/or determining an application program that includes one or more application program components required to be stored in said memory for execution of said application program;

determining whether each one of said one or more application program components of said application program are stored in said memory so that said application program can be executed by said computing system after said receiving, identifying and/or determining of said application program; and

causing at least one application program component of said one or more application program components of said application program not to be loaded into said memory when said determining determines that said at least one application program component is stored into said memory and consequently available for execution of said application program.

27-50

2-nd invention: Method for generating differential application data comprising:

receiving, identifying and/or determining first and second application programs, wherein said first and second application programs respectively include first and second individual application program components required for execution of said application programs in said computing environment;

determining whether said first and second individual application program components have at least one common individual application program in common after said receiving, identifying and/or determining of said first and second application programs; generating application differential data for said first and/or second applications programs, wherein said application differential data effectively indicates that said first and second application programs have at least one common individual application program components in common when said determining determines that said first and second individual application program components have at least one common individual application program in common; and

store the application differential data for execution of said first and/or second applications programs.

They are not so linked as to form a single general inventive concept (Rule 13.1 PCT) for the following reasons:

The feature: receiving an application program is not the same as the feature: receiving a first and a second application program. Hence, there are no common nor corresponding features.

Moreover, the two methods solve different technical issues which is apparent from the usage specification of each of the defined methods: method for loading application programs into memory for execution and method for generating differential application data. Hence non-unity arises a priori.

**Re Item V.**

- 1 Reference is made to the following document:  
D1 : EP 0 491 585, 24-06-1992
- 2 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of independent claims 1, 2, 20, 23 is not new in the sense of Article 33(2) PCT.
  - 2.1 The subject-matter of independent claim 1 is not new as D1 discloses:  
*A computing system, comprising:  
memory (D1, col 4, lines 2-4, "memory");  
one or more processors, (D1, col 4, lines 2-4, "computer", Hence, a processor)  
wherein said one or more processors are configured and / or operable for:  
receiving, identifying and / or determining an application program that includes  
one or more application program components required to be stored in said  
memory for execution of said application program (D1, col 4, lines 25-42,  
"spawning a second instance of a computer program", Hence, receiving,  
identifying and determining is implicit but unambiguously disclosed);  
determining whether each of said one or more application program components of  
said application program are stored in said memory so that said application  
program can be executed by said computing system after said receiving  
identifying and / or determining of said application program (D1, col 4, lines 25-42,  
"establishing whether said second instance requires said software module which  
has been previously loaded into said private area by said first instance of said*

computer program"); and causing at least one application program component of said one or more application program components of said application program not to be loaded into said memory when said determining determines that said at least one application program component is stored into said memory and consequently available for execution of said application program (D1, col 4, lines 25-42, "upon establishing that said second instance requires said software module obtaining said address from said global environment area; and branching to said address", Hence, said software module is NOT reloaded).

- 2.2 The subject-matter of independent claims 2, 20, 23 is not new. The objections made to the subject-matter of claim 1 applies mutatis mutandis to the corresponding subject-matter of claims 2, 20, 23.
- 3 Dependent claims 3-18, 21-26 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).
- 3.1 Claims 3-4, 16, 17 and 21  
In particular are claims 3, 4, 16, 17 and 21 not new in view of D1 (see passages cited).
- 3.2 Claims 12-14 and 22  
The subject-matter of claim 12-14 and 22 is not unitary with the subject-matter of claim 3 however, said features are independent from the other method features and it is obvious to apply the system and the method of D1 in a computing system used for gaming.
- 3.3 Claims 5-11, 18 and 24-26  
Claims 5-11 and 18 and 24-26 comprise features related to *differential application data*. Said claims attempt to define methods and corresponding systems for loading software application components based on differential application data. Document D1 discloses a global environment area which comprises the address of all the loaded modules. On the basis of this data the system and method of D1 decide which application components still have to be loaded. This is equivalent with the use of the differential application data. The actual structure and

implementation details of the data on which said decision is based is considered an implementation choice well within the reach of the skilled person, not involving an inventive step.

- 3.4 The unclarity of the subject-matter of claim 19 is such that meaningful assessment of novelty and inventive step is not possible at this stage.

**Re Item VIII.**

- 4 The application does not meet the requirements of Article 6 PCT, because claims 1, 2, 20, 23, 24, 26 and 19 are not clear.
- 4.1 The subject-matter of independent claims 1, 2, 20, 23, 24 and 26 lack essential features.

It is clear from the definition of claim 2, "*A method for loading a computer application program ...*" that a step of loading application program components is essential for the method to work. At present the claim only defines the components which are not loaded, hence at present nothing is loaded. Therefore the present definition fails to define a method for loading. An application that is not loaded can not be executed.

Since independent claims 1, 2, 20, 23, 24 and 26 relate to one invention and none of these claims comprise said step of *loading application program components*, claims 1, 2, 20, 23, 24 and 26 do not meet the requirement following from Article 6 PCT taken in combination with Rule 6.3(b) PCT that any independent claim must contain all the technical features essential to the definition of the invention.

Only when the step of determining reveals that the whole application was already loaded the application can be successfully executed. This is defined in claims 24 and 26, however, this appears not to cover the invention as described in the description.

It is furthermore noted that claim 21 comprises the feature *providing other application components for loading ....* Hence, claim 21 does not lack essential features.

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

International application No.

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- 4.2 Claim 19 is not clear. In that is not clear how said method step relates to the other method steps.